AMENDMENTS TO THE CLAIMS

Claims 1 to 10 (cancelled)

Claim 11 (cancelled)

Claims 12 to 15 (cancelled)

Claim 16 (new)

A protein of the sequence SEQ ID No: 2 purified to electrophoretic homogeneity from cultures of cells of strains of *Aspergillus niger*.

Claim 17 (new)

A recombinant protein of sequence SEQ ID No: 2 corresponding to a recombinant fungal epoxide hydrolase obtained by transformation of suitable host cells by means of vectors containing the neucleotide sequence SEQ ID No: 1 encoding the epoxide hydrolase of SEQ ID No: 2.

Claim 18 (new)

A nucleotide sequence of SEQ ID No: 1 encoding the epoxide hydrolase of SEQ ID No: 2, the aforementioned sequence being of single-stranded or double-stranded form.

Claim 19 (new)

A vector containing a nucleotide sequence according to claim 18.

Claim 20 (new)

A host cell selected from the group consisting of bacteria, viruses, yeasts, fungi, plants and mammalian cells, the said host cell being transformed by a vector of claim 19, so that its genome contains a nucleotide sequence of SEQ ID No: 1 encoding the epoxide hydrolase of SEQ ID No: 2, the aforementioned sequence being of single-stranded or double-stranded form.

Claim 21 (new)

A method of preparation of epoxides and/or of enantiomerically pure vicinal diols comprising a stage of treatment of a mixture of diastereoisomeric epoxides, or of a chiral epoxide in racemic form, or of a prochiral epoxide, with a protein of sequence SEQ ID No: 2 purified to electrophoretic homogeneity, or with a recombinant protein of sequence SEQ ID No: 2, or with a host cell of claim 20 expressing a recombinant protein of sequence SEQ ID No: 2.

Claim 22 (new)

A method of preparation of a recombinant protein of sequence SEQ ID No: 2, comprising transforming host cells with a vector containing the nucleotide sequence of SEQ ID No: 1, and purifying the recombinant protein of sequence SEQ ID No: 2 produced by the said cells.

Claim 23 (new)

A method of preparation of protein of sequence SEQ ID No: 2 purified to electrphoretic homogeneity from cultures of cells of strains of *Aspergillus niger*, comprising:

- extracting the enzyme from cellular cultures of *Aspergillus niger*, by crushing the fungus using a press, followed by a stage of low-speed centrifugation, recovery of the supernatant, and, optionally, concentration of the same,

- and purifying the enzyme from the extract obtained in the preceding stage by successive passages through columns of DEAE-Sepharose, Phenyl-Sepharose, Mono Q and Superose 12.